Name:_____

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Geometry, Period_____

Due Date: Thu, 19 Feb 2015

HW103_TrigRatios(Sin,Cos)

Geometry Homework

Form A

ailure to show all work will result in LaSalle. (Always... even if this isn't written on the homework.)

- What does SOHCAHTOA stand for?

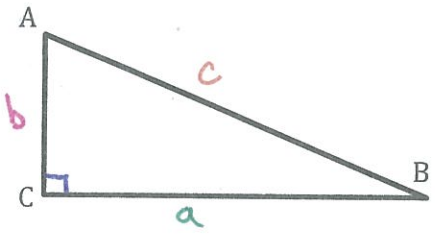
- What do the Sine & Cosine ratios have in common that Tangent does not use?

1) Find each trigonometric ratio for the given right triangle.

sin A = _____

cos A = _____

tan A = _____

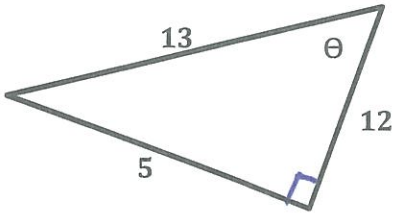


2) Find each trigonometric ratio for the given right triangle.

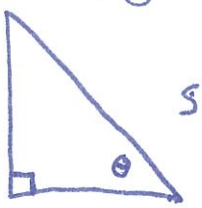
sin Θ = _____

cos Θ = _____

tan Θ = _____



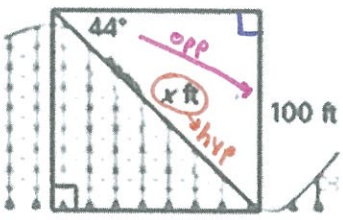
3) An angle in a right triangle has a measure Θ. If $\tan\Theta = \frac{8}{15}$, then sin Θ = ?



$\tan\theta = \frac{\text{opposite}}{\text{adjacent}}$

$\sin\theta = \frac{\text{opposite}}{\text{hypotenuse}}$

4) You are at the top of a roller coaster 100 feet above the ground. The angle of depression is 44°. About how far do you ride down the hill?



5) In the figure below, △ ABC is a right triangle with a right angle at C. Which of the statements about this figure can NOT be correct?

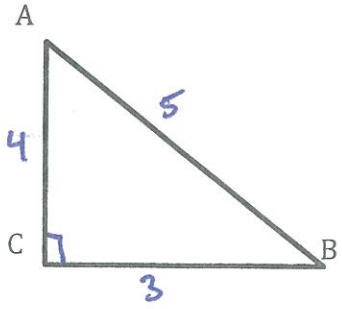
a. $\sin A = \frac{3}{5}$

b. $\cos A = \frac{4}{5}$

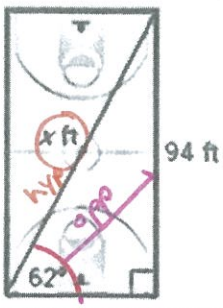
c. $\tan A = \frac{3}{4}$

d. $\cos B = \frac{4}{5}$

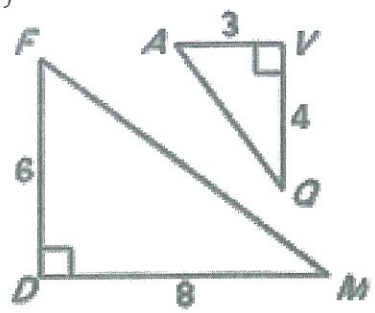
e. $\tan B = \frac{4}{3}$



6) You walk from one corner of a basketball court to the opposite corner. Write and solve a proportion using a trigonometric ratio to approximate the distance of the walk.



8)



a. What is the sine of M?

b. What is the cosine of F?

c. What is the sine of A?

d. What is the cosine of Q?

e. What is the sine of Q?

f. What is the cosine of A?

g. What is the tangent of Q?

h. What is the tangent of A?

Spiraled Review ~ show all work or explain your answer

1.

Which of the following is a factor of $a^2 + 7a - 18$?

make your box!

A. $a - 2$
B. $a - 3$
C. $a - 9$
D. $a + 2$
E. $a + 3$

2.

If the area of a square can be given by the expression $x^2 - 12x + 36$ square units, which of the following could represent its perimeter (in units?)

$A = s^2$

$x^2 - 12x + 36 = s^2$

F. $2x - 12$
G. $4x - 24$
H. $4x$
J. $4x^2 + 24$
K. $24x$

3.

Write an equation of a line passing through point
(–1, 3) and parallel to $y = 2x + 2$.

(x,y)

$y = 2x + b$

$3 = 2(-1) + b$

A) $y = 2x + 1$
B) $y = \frac{1}{2}x + 1$
C) $y = -\frac{1}{2}x + 1$
D) $y = -2x + 1$
E) None of the above

4.

What is the equation of the line perpendicular to $2x + y = -1$ and passing through the point (4, 3)?

$y = -2x - 1$ → perp to this line is $\frac{1}{2}$

$y = \frac{1}{2}x + b$

A. $y = -\frac{1}{2}x + 5$
B. $y = 2x - 5$
C. $y = -2x + 11$
D. $y = \frac{1}{2}x + 1$

5.

If x and y are real numbers such that $xy = 4$, then $0 < x < 1$ if and only if:

X	Y	XY
$\frac{1}{2}$		4

A. $0 < y < 1$
B. $0 < y < 4$
C. $y > 0$
D. $y > \frac{1}{4}$
E. $y > 4$

6.

The figure below is made from a square and a right triangle. The square has an area of 16 square feet, and the base of the triangle is 2.5 feet long. What is the area of the triangle, in square feet?

$A = s^2$

$16 = s^2$

$s =$

16 ft²

2.5

$A = \frac{bh}{2}$

A. 4
B. 5
C. 7.5
D. 10
E. 13